

5/037/012/  
cc:wayne  
0009

**UTAH ENERGY CORPORATION**

1300 S Highway 191  
Post Office Box 1346  
Moab, Utah 84532  
(435) 259-2333 Office  
(435) 259-9864 Fax

[www.WhiteCanyonUranium.com.au](http://www.WhiteCanyonUranium.com.au)

December 8, 2009

RECEIVED

DEC 15 2009

DEPT. OF OIL, GAS & MINING

Mr. Jay P. Morris  
State of Utah  
DEQ - Division of Air Quality  
Minor Source Compliance Section  
150 North 1950 West  
Salt Lake City, UT 84114

Re: Proposed Air Quality Monitoring Plan (Method 114 A-7)  
Daneros Mine Permit #S0370121

Dear Mr. Morris:

As stated in the EA for the above referenced mining permit, *"The proposed Daneros Mine would not produce more than 100,000 tons of ore during the life of the mine so ambient air radon tests and annual radon reporting is not required per 40 CFR Part 61 subpart B. However, UEC proposes to implement radon monitoring and reporting procedures consistent with the NESHAP standards as outlined at 40 CFR Part 61Subpart B."*

UEC has committed to conducting required air monitoring as per BLM instruction found in the "Finding of No Significant Impact / Decision Record, ATTACHMENT B – Compliance and Monitoring Requirements, Daneros Mine Plan of Operations".

"UEC shall measure radon levels and flow rates in the mine exhaust air consistent with the standards of EPA regulations at 40 CFR Part 61. This data would then be input into an EPA air-modeling program to predict radiation levels at the nearest residence. The collected data and modeling results shall be reported annually to the Utah Division of Air Quality. UEC shall provide copies of these reports to the BLM."

The specific method was not identified in the FONSI/DR. However, UEC plans to use Method 114 A-7 to conduct testing for radon-222 emissions, as required by Method 115 and hereby submits the enclosed Air Quality Monitoring Plan for review.

0009

It is my understanding that your office, Division of Air Quality, administers the review on behalf of the State and the EPA. Please contact me directly at (435)260-1554 if you have any questions or require further information.

Regards,

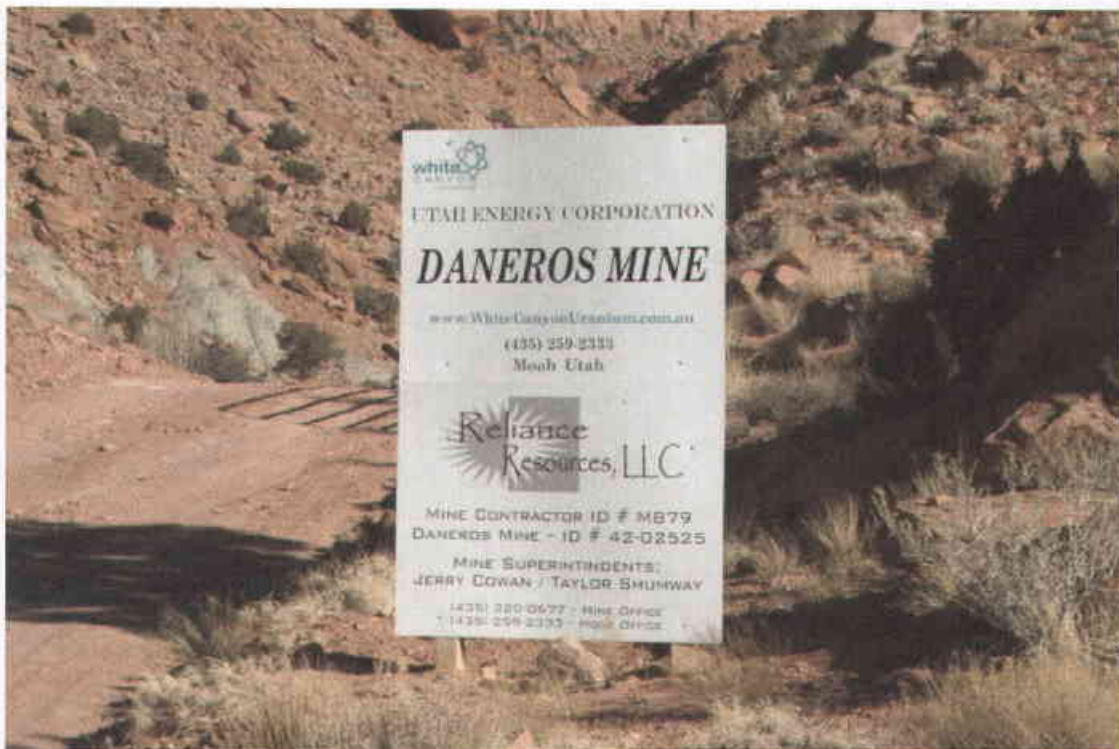
*Kelly Shumway*

Kelly Shumway  
Vice President

Encl: Air Quality Monitoring Plan – Daneros Mine  
*Documents formerly submitted 19 Nov 09:*  
*State of Utah Permit Approval*  
*BLM Permit Approval*  
*Decision Record, Finding of No Significant Impact and Environmental Assessment*

Cc: Ted McDougall, BLM  
Paul Baker, Division of Oil, Gas & Mining

**Air Quality Monitoring Plan for Daneros Mine  
December 2009**



## Introduction

Utah Energy Corporation (UEC) is required to monitor air quality at the Daneros Mine in San Juan County, Utah. This requirement is stipulated by the U.S. Department of Interior, Bureau of Land Management (BLM) in the Compliance and Monitoring Requirements for the Daneros Mine Plan of Operation (Attachment B, FONSI, Decision Record, Monticello Field Office) as follows:

“3. UEC shall measure radon levels and flow rates in the mine exhaust air consistent with the standards of EPA regulations at 40 CFR Part 61. This data would then be input into an EPA air-modeling program to predict radiation levels at the nearest residence. The collected data and modeling results shall be reported annually to the Utah Division of Air Quality. UEC shall provide copies of these reports to the BLM.”

In order to comply with this requirement, UEC has developed the following Air Quality Monitoring Plan for the Daneros Mine. This plan provides basic information regarding the current mine venting methods and outlines the steps that UEC proposes to take with regard to air quality monitoring.

## Current Mine Venting Methods

As of December 2009, the Daneros Mine features only two openings: the Main Decline and the Vent Decline. The Plan of Operation calls for the construction of two vertical vent holes (North and South Vent Holes); however, these vent holes will not be constructed for approximately two years. The mine is currently vented by using fans to draw air in through the Vent Decline, and out through the Main Decline. A 50 horsepower (hp) fan is used to push air down the Vent Decline. Two 30 hp fans ventilate the faces from the cross cut between the Vent Decline and the Main Decline, forcing air out of the Main Decline.

## Proposed Air Quality Monitoring Procedures

1. UEC proposes to monitor using RadTrak Alpha Track radon gas detector (manufactured by Landauer, Inc.) (Figure 1) designed to monitor radon to obtain a long term average concentration over time. This will comply with EPA Method 114 A-7 (40 CFR Part 61, Appendix B) for testing radon<sup>222</sup> emissions, as required by EPA Method 115.
2. UEC proposes to place two detectors on large (greater than 10'x10') openings (i.e. Main Decline) and one detector on small (less than 10'x10') openings (i.e. North and South Vent Holes) to ensure a redundant and robust measurement system.
3. Detectors are changed out every 30 days. A “Mine Opening Air Quality Sampling Form” will be completed for each detector (an example is provided as Attachment 1). The Form will keep track of when devices are installed, who installs them, and when and who retrieves them.

4. The "used" detector will be shipped to Landauer, Inc. When the detector is returned to Landauer's laboratory, the alpha tracks are counted using computer-assisted image analysis equipment. Landauer prepares a report with the radon gas measurement, reported in picocuries per liter of air (pCi/l) which is mailed within 7-10 days after receipt of detector back to UEC.
5. UEC will forward a copy of the report to BLM and State of Utah DAQ and files the original report with other mine documents. Other necessary reports, such as the COMPLY-R yearly report, and forms will be filed in a timely manner.
6. The Measured Air Velocity (f/m) will be measured using a Davis Instrument Anemometer (or equivalent) (Figure 2) a minimum of three times in a 10 minute interval. The three readings will be averaged and this value used to calculate air flow, expressed as cubic feet per minute.
7. The anemometer will be maintained as necessary. The newer electronic anemometers do not require calibration; only periodic replacement of the impeller.
8. Each measuring point will be identified with a unique identifier so as to ensure traceability. Initially, the monitoring equipment will be placed at the Main Decline portal only, as this is the only point where air is currently vented from the mine (Figures 2, 4, and 5). When the North and South Vent Holes are drilled and become operational (in roughly two years), additional monitoring equipment will be placed at these locations (Figure 5).
9. The mine operator will keep weekly records of mine vent operation and note all periods when vent fans were not operating and duration of shut down.
10. UEC proposes to install a small weather station to measure wind direction and speed. This station will be installed according to manufacturer's specifications and maintained by mine personnel. Raw data will be stored for the life of the mine project, and would be available to UDAQ if needed.
11. Data from vent flow measurements, radon gas concentrations, and local meteorology will be used to perform and report the yearly COMPLY-R modeling.
12. The distance and direction to the nearest human receptors will be identified and entered into the COMPLY-R model, as appropriate.
13. After the first year of mine operation the information gathered in the procedures outlined above will be used to run the COMPLY-R model. Model results and a summary of input data will be prepared and transmitted to UDAQ and BLM in a letter report.



**Figure 1. Radtrak Alpha Track radon gas detector**



**Figure 2: Typical Installation of RadTrak located at the Main Decline portal (RadTrack detector not shown).**





Figure 3: Davis Instrument Anemometer Serial # 86219

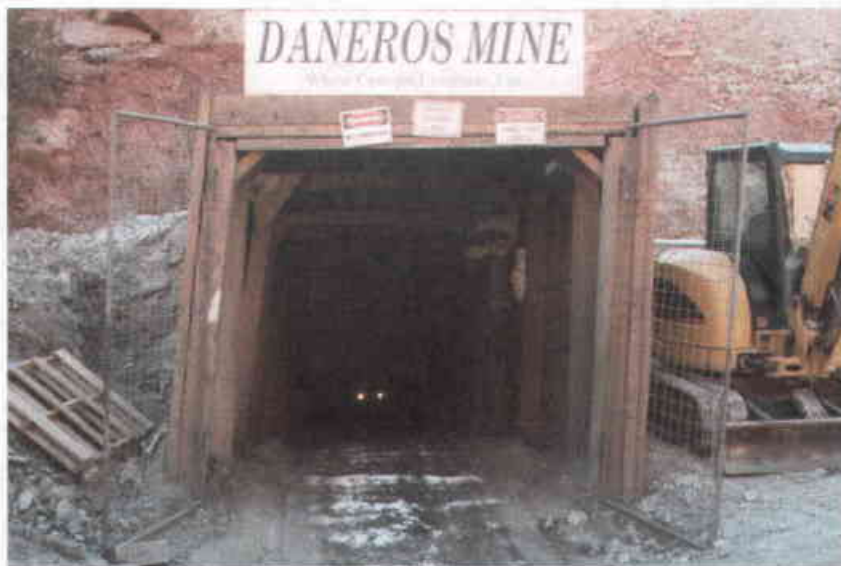


Figure 4: Location of RadTrack Detectors and Anemometers. Two of each will be installed at the Main Decline portal, shown above.

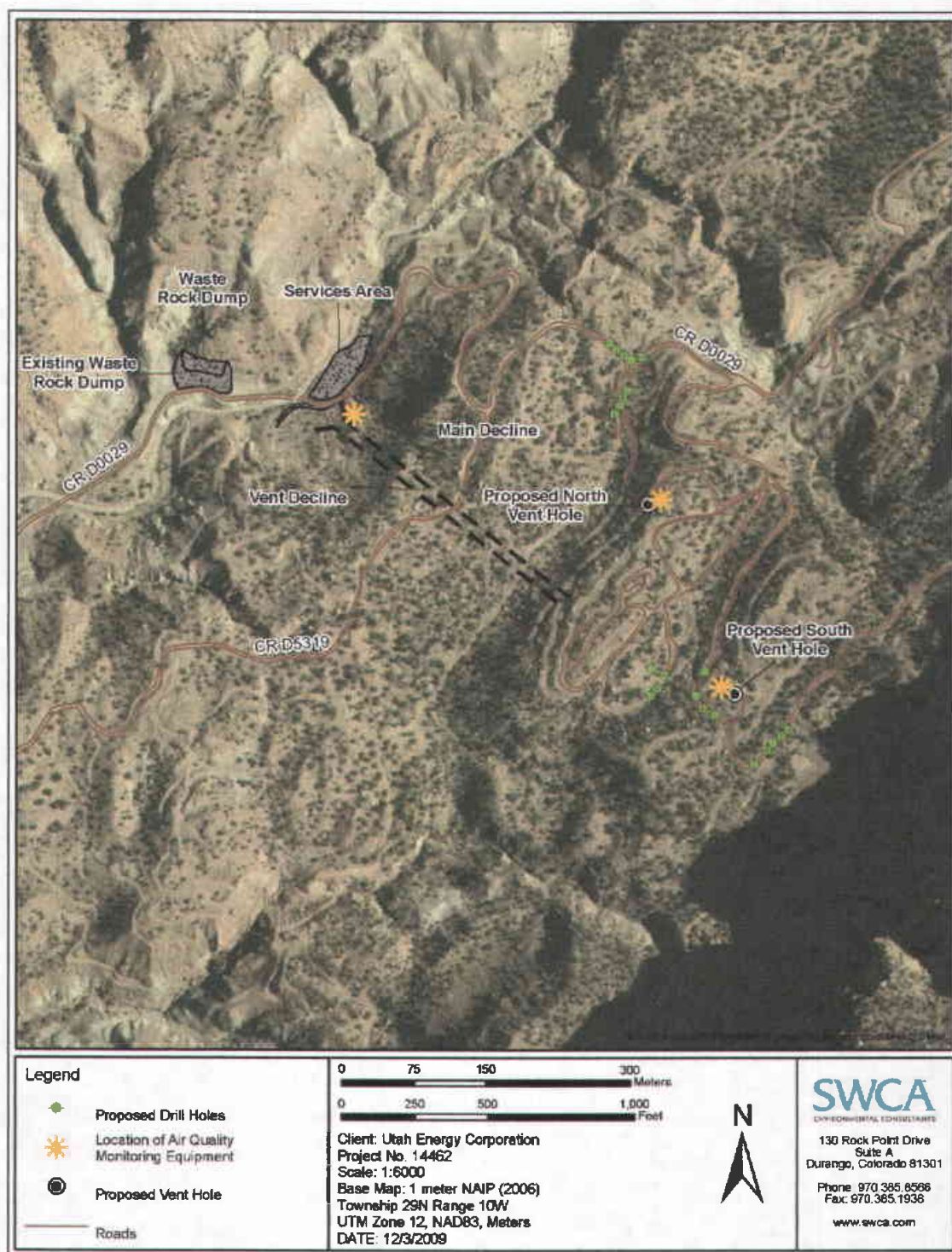


Figure 5: Plan View of Daneros Mine showing proposed locations of air quality monitoring equipment.



## Mine Opening Air Quality Sampling Form Daneros Mine

1	Vent Hole ID No.	
2	Vent Hole Location	
3	Sample ID No.	
4	Date Radon Detector Employed	
5	Date Radon Detector Removed	
6	Height of Vent Hole	
7	Diameter of Vent Hole	
8	Measured Air Velocity (f/m)	
9	Calculated Air Flow Rate (cfm)	
10	Calibration Information for Anemometer (date tested /measurement error)	
11	Date Radon Detector Shipped to laboratory	
12	Name of Laboratory	
13	Print Name of Sampling Technician	
14	Signature of Sampling Technician	
	Notes	

3 – Mine opening ID Number followed by the date (dd/mm/yyyy).

6 – Measure height 4 times at different locations across the drift and calculate average.

7- Measure width 4 times at different heights across the drift and calculate average.

12 – For the RadTrak detectors these are shipped to Landauer, Inc.